MASH
MELBOURNE ANIMAL SPECIALIST HOSPITAL

Understanding Your Diagnosis
Cranial Cruciate Ligament Disease

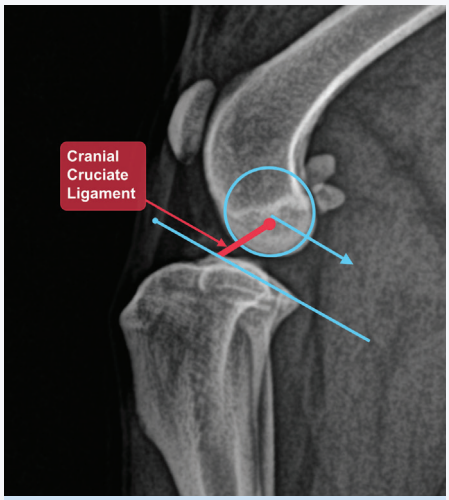
The cranial cruciate ligament is one of the most important structures in the stifle (knee) joint.

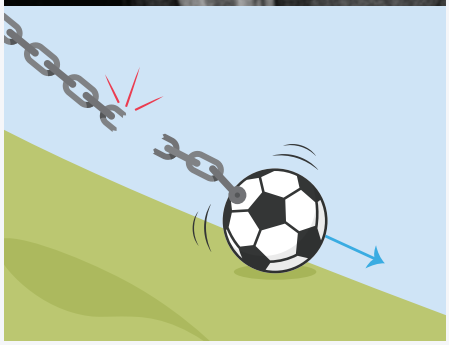
Every time your pet weight bears on their back leg, the cranial cruciate ligament is loaded, and it prevents the femur (thigh bone) from sliding off the back of the tibia (shin bone).

The top of the tibia slopes backwards and the bottom of the femur is rounded like a ball. Weight bearing through the knee is essentially placing a ball onto a hill, and of course the ball wants to roll down the hill. The cranial cruciate ligament prevents the ball from rolling down the hill and allows the joint to act more like a hinge.

If the cranial cruciate ligament is ruptured, there is nothing to stop the ball from rolling down the hill and this abnormal motion leads to pain and arthritis.

The meniscus is a wedge of cartilage that is also important to joint stability. If the cranial cruciate ligament is damaged and the ball rolls down the hill, part of the meniscus is trapped behind the ball and can get squashed causing further pain.





Surgery is aimed at removing any damaged cruciate ligament and meniscus and stabilising the joint so that the ball is no longer able to roll down the hill.

TIBIAL PLATEAU LEVELING OSTEOTOMY (TPLO)

Tibial Plateau Leveling Osteotomy (TPLO) is the gold-standard treatment for cranial cruciate ligament disease and works by flattening the top of the tibia so that there is no longer a hill. The top of the tibia is cut with a saw, repositioned, and then stabilised with a very strong metal plate and screws. Once we have flattened the hill, there is no tendency for the ball to roll anywhere and the joint can function normally.

EXTRACAPSULAR CRUCIATE REPAIR

Extracapsular cruciate repair is an alternative surgery that is suitable for small dogs (under 10kg) if TPLO is not financially feasible. It works by placing a prosthetic ligament on the outside of the joint in an orientation similar to the cranial cruciate ligament.

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